

## Germany

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Verfahren zum Kalibrieren einer elektronisch phasengesteuerten Gruppenantenne in Funk-Kommunikationssystemen

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**Original Abstract:** Erfindungsgemass werden zum Kalibrieren einer elektronisch phasengesteuerten Gruppenantenne in Funk-Kommunikationssystemen unter Verwendung eines fur alle Referenzsignale gemeinsamen Referenzpunktes im Downlink von den einzelnen Antennenelementen der Gruppenantenne voneinander unterscheidbare Referenzsignale zeitgleich ausgestrahlt und nach dem Empfang an den gemeinsamen Referenzpunkt geeignet separiert.

### Alerting Abstract WO A1

The method involves using a common reference point for all reference signals.

Distinguishable reference signals are radiated from the individual antenna elements (AE1-AEN) of the array for antenna calibration in the upward direction. The signals are suitably separated after reception at the common reference point (AR).

CDMA encoding and decoding is used for the reference signals.

USE - For calibrating electronic phase-controlled array antenna in mobile radio communications system.

ADVANTAGE - Considerably reduces the time to calibrate intelligent antennas in downlink..

**Title Terms /Index Terms/Additional Words:** CALIBRATE; METHOD; ELECTRONIC; PHASE; CONTROL; ARRAY; ANTENNA; RADIO; COMMUNICATE; SYSTEM; REDUCE; TIME; INTELLIGENCE; RADIATE; DISTINGUISH; REFERENCE; SIGNAL; INDIVIDUAL; ELEMENT; UP; DIRECTION; SEPARATE; AFTER; RECEPTION; COMMON; POINT

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Calibration method for electronic phase-controlled array antenna in a radio communications system considerably reduces the time to calibrate intelligent antennas in the downlink - involves radiating distinguishable reference signals from individual antenna elements for antenna calibration in upward direction, separating after reception at common reference point

Patent Assignee: SIEMENS AG (SIEI)

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**Patent Family ( 10 patents, 22 & countries )**

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